This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) ~~Method~~ A method for mixing and distributing a gas and a liquid in a chamber comprising a distribution means constituted by a compartment that is filled with liquid through which a gas stream passes, whereby said method is characterized in that:
   - Liquid is injected either in gas ~~countercurrent~~ countercurrently or in gas ~~co-current~~ co-currently into ~~the~~ a gas passage section or sections through at least two orifices that are present in said compartment, whereby said two orifices are arranged approximately facing one another, and
   - The diameter and the number of orifices and/or the speed V of the liquid at the outlet of each of the orifices and/or the distance d between two injection points placed facing one another are selected such that the Froude number F_r, defined by the equation:

$$F_r = \frac{V}{\sqrt{g \times d}}$$

in which g is the gravitational constant,

is more than 0.5.

2. (Currently Amended) ~~Method~~ A method according to claim 1, wherein the Froude number F_r is more than 1.

3. (Currently Amended) ~~Method~~ A method according to Claim 1, wherein the distribution means ~~consists of~~ comprises a compartment that is filled with liquid through which at least one passage section for the gas passes and in which the passage section or sections are pipes of essentially rectangular cross-sections.

4. (Currently Amended) ~~Method~~ A method according to Claim 1, wherein the distribution means ~~consists of~~ comprises a compartment that is filled with liquid through which at least one

PET-2243

passage section for the gas passes and in which the passage section or sections is or are shafts that are essentially circular cross-sections.

5. (Currently Amended) ~~Method~~ <u>A method</u> according to claim 4, wherein the diameter of the shaft is such that the speed of the liquid at the base of the shaft is less than $0.35 \sqrt{g\, d_c}$, where d_c is the mean diameter of a passage section, and g is the gravity field acceleration.

6. (Currently Amended) ~~Method~~ <u>A method</u> according to claim 4, wherein the number of injection orifices facing one another is between 2 and 5.

7. (Currently Amended) ~~Method~~ <u>A method</u> according to Claim 1, wherein the distribution means ~~consists of~~ <u>comprises</u> a liquid compartment encompassed in a continuous passage section of the gas in said chamber, whereby said compartment comprises a central portion and arms that are placed on both sides of said central portion and that extend toward ~~the wall~~ <u>walls</u> of the chamber, whereby orifices for injection of the liquid are provided on the walls so that an orifice has another identical orifice, opposite, placed on a contiguous arm.

8. (Currently Amended) ~~Method~~ <u>A method</u> according to Claim 1 in which the number of injection points of the liquid phase is encompassed between about 10 and about 1000 points per m^2.

9. (Currently Amended) ~~Method~~ <u>A method</u> according to Claim 1, wherein the size of the orifices for injection of the liquid is encompassed between about 1 and about 20 mm.

10. (Currently Amended) ~~Method~~ <u>A method</u> according to Claim 1, wherein the distance d between two orifices for injection of the liquid placed facing one another can be encompassed between about 10 mm and about 500 mm.

11. (Currently Amended) ~~Method~~ <u>A method</u> according to Claim 1, wherein ~~the~~ <u>a</u> distribution

PET-2243

plate is placed in the chamber upstream from a bed of catalytic solid particles or from a packing bed of ~~the~~ bulk, structured, foam, or monolithic type, in the direction of circulation of the liquid phase.

12.   (Currently Amended) ~~Application of the~~ <u>A</u> method according to Claim 1 ~~to the treatment of,~~ <u>wherein the gas is</u> an acid gas comprising at least one of the following compounds: H_2S, SO_2, CO_2, and COS.

13.   (Currently Amended) ~~Application of the~~ <u>A</u> method according to Claim 1 ~~to the processes that use~~ <u>comprising</u> at least one liquid phase and at least one gaseous phase in at least one stage for separation, for purification or for chemical transformation.